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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,207	09/21/2005	Noriaki Yukawa	033036.086	8994
25461	7590	07/15/2010	EXAMINER	
SMITH, GAMBRELL & RUSSELL SUITE 3100, PROMENADE II 1230 PEACHTREE STREET, N.E. ATLANTA, GA 30309-3592			MALEKZADEH, SEYED MASOUD	
ART UNIT	PAPER NUMBER		1791	
MAIL DATE	DELIVERY MODE			
07/15/2010	PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/519,207	Applicant(s) YUKAWA ET AL.
	Examiner Seyed M. Malekzadeh	Art Unit 1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(o).

Status

- 1) Responsive to communication(s) filed on 23 April 2010.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
 4a) Of the above claim(s) 8-11 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-7 and 12 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 22 December 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/GS-68)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Response to Amendment

Claims 1- 7 and 12 are pending.

Claims 8- 11 are withdrawn.

In view of the amendment, filed on 04/23/2010, following rejections are withdrawn from the previous office action for the reason of record.

- Rejection of the claims 1- 7 and 12 under 35 U.S.C. 112, second paragraph

Following rejections are maintained for the reason of record as given in the previous office action. The basis of theses rejections are the same as given in the previous office action, mailed on 11/23/2009.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

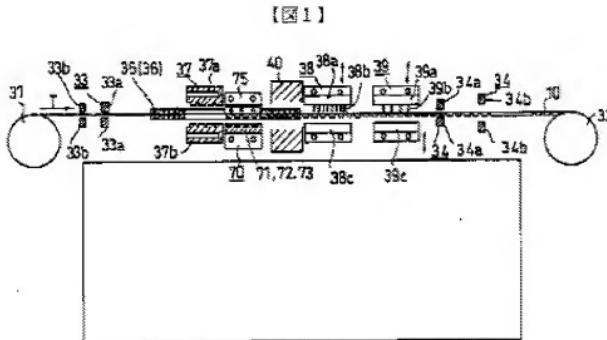
Claims 1- 2 and 5- 7 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Nagasawa (JP 10- 273107) in view of Omura et al. (US 4,374,463)

Note: Nagasawa (JP 10- 273107) is the prior art submitted by the applicant on 12/22/2004.

Nagasawa (JP '107) teach a carrier tape embossed machine comprising a supply reel (31) as a tape paying-out unit, a heating plate (37) having an upper heater block (37a) and a lower heater block (37b), an embossed molding die (70) as a forming unit for embossing on the tape, an air box (75) connected to with the rise and fall of the cylinder attached to the embossed molding die (70), the thermo-regulator (40), the feedholes punched metal mold (38) as a perforating unit for perforating at least a feeding hole in the tape, a take up reel (32) as a tape taking up unit for taking up the finished tape, a first running drive mechanism (33) and a second running drive mechanism (34) both together, as a tape feeding unit (33, 34), for feeding the tape in which the feeding unit (33 and 34) includes a first move zipper (33a) as a first double acting driving unit and a second move zipper (34a) as a second double acting driving unit in which both have an up and down motion to reciprocally

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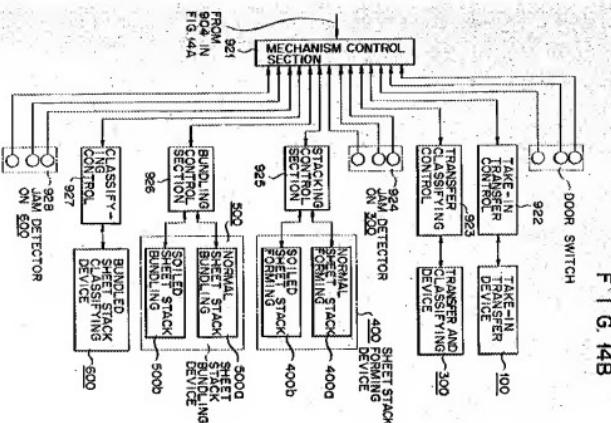
support the upper and lower sides of the tape and also include a motion in the direction of the tape length to move the tape forward in the machine direction. (See paragraphs [0014] - [0017], [0019], [0023], and [0038] and figure 1)



Thus, **as to claim 1**, Nagasawa (JP '107) teach a carrier tape embossed machine comprising a tape paying out unit (31), a tape feeding unit (33a and 34a), an embossing unit (70), a perforating unit (38), a tape taking up unit (32), a first double acting driving unit (33a) aligned with a feeding direction of the tape along a straight driving path and is capable to be fluid operated for driving the tape feeding unit, and a second double acting driving unit (34a) aligned with the feeding direction of the tape along the straight driving path and is capable to be fluid operated for driving the tape taking up unit.

Further, Nagasawa (JP '107) teach a zipper (33b) as a holding means, which is associated with the first double acting driving unit (33a), to delay a run of the tape in the machine direction. (See paragraph [0015]) **However**, Nagasawa (JP '107) **fails to teach** a controller for controlling driving/stopping of the second double acting driving unit in association with driving/stopping of the first double-acting driving unit.

In the analogous art, Omura et al (US 4,374,463) teach an apparatus for processing sheet like materials in which the apparatus comprises a unit sheet-stack transfer mechanism (100) functioning similar to the first double-acting unit, a transfer classifying device (300) functioning similar to the second double-acting unit, a mechanism control section (921) as a controller, a take in transfer control (922) connecting the first double-acting unit (100) and the controller (921), and a transfer classifying control (923) connecting a second double-acting unit (300) with the controller (921). Furthermore, the apparatus comprises a mechanism for forming a bundling loop, a bundling mechanism having means for inserting the unit sheet stack into the bundling loop, wherein the bundling loop forming mechanism comprises a plurality of guide plates. (See column 23, lines 57-68; column 24, lines 1-25; column 25, lines 36- 69, and figure 14B)



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Therefore, it would have been obvious for one of ordinary skill in the analogous art at the time of applicant's invention to modify the teachings of Nagasawa (JP '107) through **providing** a controller which is associated with the both of the first double-acting driving unit and the second double-acting driving unit **in order to** improve the workability and to control the apparatus operation which results in avoiding the damage of the produced articles, as suggested by Omura et al (US '463)

Further, as to claim 2, Nagasawa (JP '107) discloses a paying out operation by the tape paying out unit (31) is effected by the first double acting driving unit (33a) provided for the tape feeding unit for feeding a tape feeding operation.

Further, Nagasawa (JP '107) teach a fixed zipper (34b) located on the upper and lower sides of the tape so that by an up and down motion fastens

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the tape and the tape is kept from moving. (See paragraph [0016]) Thus, as to claims 5- 6, Nagasawa (JP '107) discloses a tape holding means (33b) in cooperation with the feeding direction of the tape and is moveable back and forth in unison by the first double-acting driving unit (33a) for the tape feeding unit and a stopper (34b) for restricting a position of the tape holding means (33b) to adjust a feeding amount of the tape, wherein the stopper (34b) includes a forward-most position determining portion, a rear-most position determining portion and a feeding amount adjusting portion in which the feeding amount of the tape being adjustable by a feeding amount adjusting portion. Further, as to claim 7, Nagasawa (JP '107) discloses the tape holding means (33b) includes at least one pair of tape holders provided across the forming unit (70) and the perforating unit (38), and a connecting member for connecting the pair of tape holders together to be movable back and forth by the first and second double-acting driving units (33a and 34a).

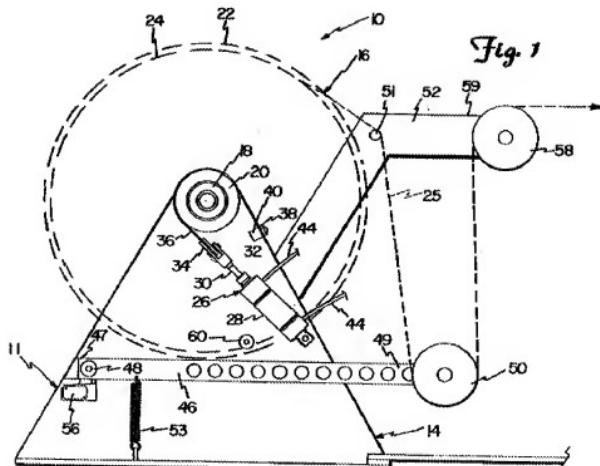
Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasawa (JP '107) in view of Omura et al (US '463), as applied to claims 1- 2 and 5- 7 above, and further in view of Larsen et al (US 5,389,190).

Combined teachings of Nagasawa (JP '107) and Omura et al (US '463) teach all the structural limitations of a carrier tape forming apparatus, as discussed above in rejection of claims 1- 2 and 5- 7; however, the combined

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teachings of Nagasawa (JP '107) and Omura et al (US '463) fail to teach the tape paying-out unit includes a dancer roller for adjusting a paying-out operation and a brake belt for braking a reel shaft of the pay-out reel.

In the analogous art, Larsen et al. (US 5,389,190) teaches an apparatus for applying a twist-tie to a multiple re-closeable, flexible packaging container including a payout mechanism for holding a supply of twist tie material; further, an extracting and cutting mechanism is configured to extract a continuous length of the twist-tie material from the supply of the twist-tie material and cut a twist tie of a desired length. (See abstract) Furthermore, Larsen et al. (US '190) teaches the payout mechanism (16) includes a dancer arm (46) pivotally secured as a first end (47) via a suitable fastener (48) to the secondary support frame (14), and a second end (49) of the dancer arm (46) includes a rotatable guide roller (50) over which the continuous length of twist-tie material (25) travels subsequent to passing over a guide pin (51) mounted on an extension arm (52) of the secondary support frame (14). (See lines 8-25, column 4 and figure 1)



Further, Larsen et al. (US '190) teaches a brake mechanism (26) forming part of the payout assembly (16) includes pneumatic cylinder (28) having an extensible rod (30). A free end (32) of the extensible rod (30) is secured to a first end (34) of a brake band (36), as a bracket belt. The brake band (36) extends around the support shaft (20) where a second end (38) of the brake band (36) is fixed to the secondary support frame (14) by a clamp (40). (See lines 54-62, column 3)

It would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify the carrier tape forming apparatus as taught by combined teachings of Nagasawa (JP '107) and Omura et al (US '463) through **providing** a dancer roller and a brake belt for braking a reel shaft of the pay-out reel of the tape paying-out unit **in order to extract an**

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efficient amount of tape from the paying-out unit while minimizing the defects and scraps during operation of the apparatus, as suggested by Larsen et al. (US '190).

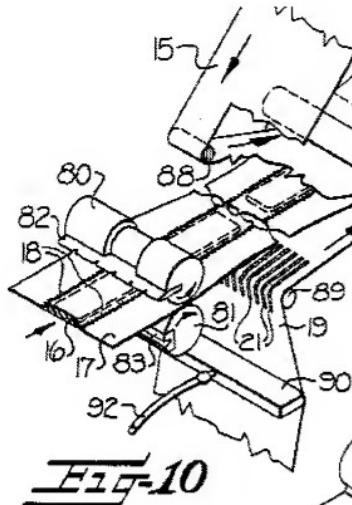
Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasawa (JP '107) in view of Omura et al (US '463), as applied to claims 1-2 and 5-7, and further in view of Teed (US 3,984,272)

Combined teachings of Nagasawa (JP '107) and Omura et al (US '463) teach all the structural limitations of a carrier tape forming apparatus, as discussed above in rejection of claims 1-2 and 5-7; however, the combined teachings of Nagasawa (JP '107) and Omura et al (US '463) fail to teach the apparatus further includes a slitting unit for slitting or cutting off a width-wise end of the tape.

In the analogous art, Teed (US '272) teaches an apparatus for successively forming disposable diapers wherein the apparatus comprises a supplying and positioning unit, and also an embossing and securing unit wherein the apparatus comprises a cutting means cooperating with the positioning means to cut the elongate pads of fibers in which the cutting means comprises feed rolls (80 and 81) positioned on each side of the elongate continuous fibers in which, together, the feed rolls form a nip there-between for receiving and feeding there-through the elongate continuous fibers.

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Furthermore, Teed (US '272) teaches each of the rollers (80 and 81) include a cutting blade (82 and 83), respectively. Therefore, the prior art teaches a slitting unit for slitting or cutting off a width off a width-wise end of the continuous fibers.



It would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify the carrier tape forming apparatus as taught by combined teachings of Nagasawa (JP '107) and Omura et al (US '463) through **providing** a slitting or cutting unit for slitting or cutting off a width-wise end of the tape **in order to** cut off a width-wise end of the tape in order to improve the apparatus by minimizing a cumbersome and tedious hand work for cutting the elongated tapes, as suggested by Teed (US '272).

**Claim 12 is rejected under 35 U.S.C. 103(a) as being
unpatentable over Nagasawa (JP '107) in view of Omura et al (US
'463) as applied to claims 1- 2 and 5- 7 above, and further in view of
Nakajima (US 4,578,140)**

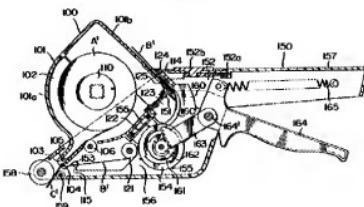
Combined teachings of Nagasawa (JP '107) in view of Omura et al (US '463) teach all the structural limitations of a carrier tape forming apparatus, as applied to claims 1- 2 and 5- 7; however, the combined teachings of Nagasawa (JP '107) and Omura et al (US '463) fail to teach the take-up reel moves with a pinion gear and a rack gear, as claimed in claim 12.

In the analogous art, Nakajima (US '140) teaches a cassette type labeler comprising a labeler body and a cassette case adapted to be attached to said labeler body comprising a base sheet, a printed label on the base sheet, an outlet, a peeling member at the outlet for peeling each of the printed label off from the base sheet, and stopping means for preventing movement of the base sheet through the labeler, wherein the labeler body intermittently feeds the base sheet through the labeler. (See column 16, lines 42- 68) Further, Nakajima (US '140) discloses a sprocket (154) which is connected to a gear (162), as a pinion gear, via a one way clutch (161) so that the sprocket (154) may be rotated only in the direction in which the base sheet (B') is carried rearward, and one end of a driving arm (163), as rack

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gear, engage with the pinion gear (162) to provide a rotation of sprocket (154). (See column 9, lines 28-34 and figure 7)

FIG. 7



It would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Nagasawa (JP '107) and Omura et al (US '463) through **providing** a take-up reel which moves by a pinion gear and a rack gear **in order to** provide a tape taking up unit with improved workability having an easy and smooth operation, as suggested by Nakajima (US '140).

Response to Arguments

Applicant's arguments filed on 04/23/2010 have been fully considered but they are not persuasive.

Applicant argues that “applicant’s first and second driving units are aligned with a feeding direction of the tape. For instance, the feeding direction of the tape is along the horizontal axis as exemplarily illustrated in Fig. 1 of applicant’s specification. The driving units (21 and 22) also are aligned along the horizontal axis. Hence, the device can be made more

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compact. Because Nagasawa's driving units are perpendicular with respect to the feeding direction of the tape, Nagasawa simply fails to describe the claimed arrangement featuring a first double-acting driving unit aligned with a feeding direction of the tape and a second double acting driving unit aligned with the feeding direction of the tape. Therefore, amended claim 1 patentably distinguishes there-over" (See remarks, page 6, lines 14- 22)

Applicant's arguments are fully considered but were not found persuasive because although the first and the second double acting driving units (33a and 34a) of the Nagasawa (JP '107) are not structurally aligned in the horizontal direction, the limitations of the claim 1, as presented now, also do not claim that the first and the second driving units (21 and 22) are structurally aligned in a horizontal direction or in a feeding direction of the tape. According to the limitations of claim 1, as now presented, the first and the second double-acting driving units are aligned with a feeding direction of the tape along the straight driving path; however, in respect to the above arguments, the claim is not clarified if the driving units are aligned in body structure with the feeding direction of the tape. According to the Merriam-Webster dictionary, the term "align" means to be in or come into precise adjustment or correct relative position and also means to bring into line or alignment. As to definition of the "alignment", the first and the second double acting driving units (33a and 34a) of Nagasawa (JP '107) come into precise adjustment or correct relative position with the feeding direction of the tape

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and also the driving units (33a and 34a) are in line with the feeding direction; **therefore**, the teachings of Nagasawa (JP '107) meets the alignment requirement of the claim as it is recited now.

Further, applicant **argues** that "Nagasawa's purported first and second driving units are not fluidly operated" and further argue that "applicants first and second double-acting driving units use a fluid that is used in the feeding cylinders for moving the tape from the tape paying-out unit to the tape taking-up unit. Consequently, applicants' driving units which are fluidly operated require specific structural dimensions for purposes of paying-out greater lengths of tape at one time in a compact device. Since Nagasawa's movable zippers are structurally distinct from the applicant's above-mentioned driving units, the amended claim 1 further patentably distinguishes there-over" (See page 6, lines 26- 28 and page 7, lines 29- 32)

Applicant's **arguments** are fully considered but **were not** found **persuasive**. Claim 1 indicates that the first and the second double-acting driving units are aligned with the feeding direction of the tape along the straight driving path and **being fluid-operated** for driving the tape taking-up unit; **however**, the claim fail to clearly define if the double-acting driving units are **structurally** "fluid operated". The claim language that "the first and the second double-acting driving units **being** fluid-operated" is not giving further structural limitations to the carrier tape forming apparatus instead the recitation is directed to the manner of operating the driving units. The

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manner or method in which a machine is to be utilized is not germane to the issue of patentability of the machine itself, *In re Casey*, 152 USPQ 235,238. Also, a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations, *EX parte Masham*, 2 USPQ2d 1647.

Therefore, the **rejections** of the claims 1- 7 and 12 are **maintained**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed M. Malekzadeh whose telephone number is (571)272-6215. The examiner can normally be reached on Monday to Friday 8:30 a.m. to 5:00 p.m.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Seyed M. Malekzadeh/

Examiner, Art Unit 1791

/Eric Hug/

Primary Examiner, Art Unit 1791